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FACTORS AFFECTING UNDERGRADUATE STUDENTS' ACADEMIC PERFORMANCE

***Sylvia @ Nabila Azwa Ambad, Faiqah Mawardi, Mohammad Firdaus Mohamad**

Faculty of Business Management, Universiti Teknologi MARA (UiTM) Cawangan Sabah, Kampus Kota Kinabalu, Sabah, Malaysia

***Corresponding author's email: nabila1793@sabah.uitm.edu.my**

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Abstract

The end results of educational process have shown that a large number of students failed to maintain a high degree of academic excellence. These failures could be due to many factors such as the students themselves, teaching and learning styles employed by the lecturers, and the university support system, among others. Thus, the aim of this study is to identify the determinant of academic performance among undergraduate students in UiTM Sabah. This aim is in line with the vision of UiTM, to generate outstanding scholars, academic excellence, and world-class standards in order to produce competitive graduates. At the same time, this study could assist the university to achieve its' quality objective, which is to ensure 90% of the undergraduate students will graduate on time. 306 students were randomly selected as samples and the questionnaires were distributed through online and face-to-face survey during class. In the questionnaire, the students were asked about their opinions on lecturers' teaching method, their attitude towards learning, and the perceived social support from family and friends in relation to their academic performance. The data were analysed using Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 3.0. The results of this study indicate that all hypotheses were supported. The students' attitude was the most significant predictor of academic performance. Furthermore, the results are beneficial to the university and lecturers as a guideline to execute appropriate teaching and learning method so as to unleash the students' full potential. Subsequently, it will help to achieve UiTM's vision and quality objectives.

Keywords: *academic performance; teaching and learning; lecturer; students; social support.*

1.0 INTRODUCTION

Academic performance among undergraduate students is the main concern since they are the future leader and will shape the direction of our nation. Excellent academic performance reflects students' intellectuality and commitment. A good academic performance is the outcome of education, which indicates that the students, teachers and institution have achieved their educational goals. University is the place where students learn to develop and improve their knowledge and skills (Mekonnen, 2014).

The main objective of education is to ensure students excel in their respective field, thus, they will be able to contribute to the society. However, the end results of the educational process have shown that a large number of students failed to maintain a high degree of academic excellence (Ankabi, 2010; Assefa,

Ohijeagbon, Negash, & Melese, 2008). These failures could be due to many factors such as the students themselves, teaching and learning styles employed by the lecturers, and the university support system, among others. Therefore, this current study aims to identify the contributing factors of a higher academic performance by examining factors that influence academic performance of the undergraduate students such as lecturers' teaching method, students' attitude and behaviour, and social support. Previous researchers have found that these are the key determinant of academic performance (Aslam & Kingdon, 2011; Ming, Ling & Jaafar, 2011; Mattanah, Lopez, & Govern, 2011). Very few studies examined these three factors simultaneously in relation to academic performance.

2.0 BACKGROUND/LITERATURE REVIEW

2.1 The Effect of Lecturer's Teaching Method (TM) on Student Academic Performance

The previous studies indicated that teaching methods influenced students' academic performance (Aslam & Kingdon, 2011; Schwerdt & Wuppermann, 2011). Lecturers' teaching method refers to the general principles, pedagogy and management strategies used for the classroom instruction. Students expect lecturers to be well organised for their class sessions, to incorporate technologies in the teaching process, and to include them in the learning process. Lecturers' teaching methods in the class affect the outcome of student acceptance of knowledge transference. This is supported by past research, which stated that teaching is a continuous process involves in bringing the desirable changes in learners to achieve specific outcomes (Ayeni, 2011). Poor academic performance by students is linked to the application of ineffective teaching methods by lecturers (Adunola, 2011). Therefore, lecturers are responsible for applying appropriate teaching methods during the process of knowledge transmission.

A lecturer's role in the classroom is associated with students' academic achievement (Grasha, 1996). This is due to the fact that the lecturer's primary roles are to facilitate, provide guidance, and to support students through the learning process so that students may actively participate in their own learning process. In addition, teaching methods work effectively mainly if they suit the learners' need since every learner interprets and responds to questions in a unique way (Chang, 2002). As such, the alignment of teaching methods with the students' needs and preferred learning influences students' academic attainments (Zeeb, 2004).

In the 21st century, using technology in teaching is a form of interactive learning in which the student's learning process is incorporated with the use of technologies such as a software system, or high-tech tablets, online collaboration, and conferencing tools. Every year more universities and colleges are deciding to implement the concept of web-based classes and classes that are technologically-enhanced (Ewing-Taylor, 1999). In a previous study by Lavooy and Palmer (2003), the group dynamics of the traditional classroom and virtual classroom were observed and compared. This study revealed that a technologically-enhanced class environment resulted in a greater cooperative group dynamic without any prompting from the instructor. Academic achievement increased with the used of modern technologies (Erdogan, Bayram, & Deniz, 2008). This is also supported by Ariffin (2007) in which the study found students participation in class was increased in relation to fun learning activities; the use of modern technologies and physical activities that encouraged students to participate in the learning process.

Lecture presentation style is often regarded as old-fashioned (Schwerdt & Wuppermann 2011). In recent years, teachers have been encouraged to increase the variety of teaching methods used in the classroom, in particular, teaching methods that emphasise student participation, such as working together in pairs and groups. Furthermore, lecturers also need to demonstrate a respect for and an interest in students' ideas and questions. It is also the teacher's responsibility to create mutual trust and understanding, to inculcate confidence in students and to become full partners in the teaching-learning process (Tiberius, 1986; Tiberius & Billson, 1991; Spouse, 2001). Therefore, it is hypothesised:

H1: The is a significant positive relationship between teaching method and academic performance

2.2 The Effect of Student's Attitude (SA) on Academic Performance

Students' attitude is one of the elements that need to be considered as a guiding tool towards their performance in academic as a whole. Students' attitude can be defined as a measure of students' positive and negative feelings towards learning, difficulty and self-efficacy, and the general impression towards the action taken to perform academic excellence (Thurstone, 1970).

Students who have a positive attitude towards learning were found to be more committed in their studies. They attended classes in a timely manner, enjoyed attending and doing class activities, participated actively in class, prepared their own notes, and made an early preparation for classes. In contrast, students with negative attitudes towards learning tended to be anti-social and completely disengage from learning environment (Awang, Jindal-Snape, & Barber, 2013).

Prior research suggested the importance of students' positive attitude in determining the students' overall achievement (Erdogan, Bayram, & Deniz, 2008). If the students display interest in a particular subject, they are more likely to achieve better results in the subject (Abdullah, Mesir, & Mohamad, 2006; Zainudin, Suhashila, Najib, & Hamdan, 2007). Preparation before class enhances the students' knowledge on a particular subject, therefore, will help them to better understand the subject matter (Beskeni, Yousuf, Awang, & Ranjha, 2011). The study found that students who undertook the effort to learn by themselves before attending classes would significantly achieve a better academic performance (Ming, Ling, & Jaafar, 2011).

In addition, students who actively participated in class had a higher level of academic achievement compared to those with a low level of participation (Gunuc, 2014). These findings were also supported by a 20-year research by the Community College Leadership Programme, University of Texas, in Austin, which revealed that the more actively the students participated in the learning process, the more likely they gained knowledge and committed to their studies, thus, they will attain their academic goals (McClenney, Marti, & Adkins, 2012). Therefore, it is hypothesised:

H2: There is a positive relationship between students' attitude and academic performance.

2.3 The Effect of Social Support (SS) on Academic Performance

In this study, social support refers to perceived care, support, and assistance from other people such as family and peers. The social support concept was adapted from the social provision scale initiated by Weiss (1974) and Cutrona and Rusell (1987). They contended that as a human being, social relationship and support are important aspects of an individual's well-being.

This study adapted four types of social support essential for students to cope with university life and to achieve better academic performance (Dupont, Galand, Nils, Hospel, 2014). These dimensions are: i) guidance, ii) tangible help, iii) attachment or expressions of caring and love, and iv) social integration or mutual interests. Students who have a good relationship and support from peers and family are more motivated and committed in their learning activities (Connell & Wellborn, 1990) and it helps them to perform better in the university (Lee, Smith, Perry, & Smylie, 1999).

Family support is not only in the form of monetary but also comprises the emotional support, caring, encouragement, and guidance. Support from family, especially from parents has a significant contribution to the students' academic achievement (Franco & Levitt, 1998; Mahaffy, 2004; Gonzalez-Pienda, Nunez, Gonzalez-Pumariega, Alvarez, Roces, & Garcia, 2002). In addition, perceived family support increases students' ability (Mattanah, Lopez, & Govern, 2011), positive value attributes, and learning engagement (Reynolds & Clements, 2005). Subsequently, these positivity increases the students' achievement (Cutrona, Cole, Colangelo, Assouline & Russell, 1994).

At the university, students will communicate, and work with their peers to complete certain learning tasks and to socialise. During university years, students spent more time with their peers compared with their family. They exchanged advice, opinions, experiences, and encourage each other. A study conducted among Egyptian nursing students found that peer attachment had a significant effect on their academic performance (Gemeay, Ahmed, Ahmad, & Al-Mahmoud, 2015). Students who have a better social support learned more and performed better academically (Lee, Smith, Perry, & Smylie, 1999). Thus, it is hypothesised:

H3: There is a significant positive relationship between social support and academic performance.

3.0 METHODOLOGY

This study aims to identify the determinant of students' academic performance. The conceptual framework employed by this study is depicted in Figure 1. There are three independent variables, namely the lecturers' teaching method, students' attitude, and social support. The academic performance is the dependent variable. Both independent and dependent variables were collected through an online and face-to-face survey conducted with a structured questionnaire. The questionnaire was adapted from previous research. The measurement of academic performance was adapted from Martha (2010), while for the teaching method, the method was adapted from Arends (2007) and Jefferson and Kent (2001). The widely used Social Provisions Scale developed by Cutrona and Russell (1987) was used to measure the perceived social support. The measurement of students' attitude was adapted from Kerr (2005). All responses were measured using five-point scale items, ranging from "1=strongly disagree" to "5=strongly agree".

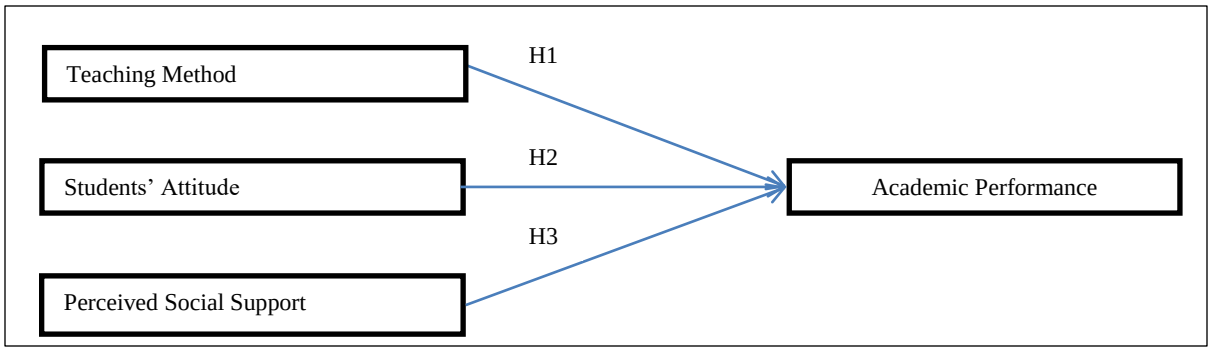

Figure 1 Conceptual Framework

3.1 Sample characteristics and data collection method

The participants in this study were the Diploma students of UiTM, Sabah. A total of 400 questionnaires were distributed through online at https://goo.gl/forms/orteOhOBTKRhFRh92 and face-to-face survey. Overall, 310 responded and submitted the questionnaires, however, only 306 were valid, completed, and useable for analysis.

Based on Table 1, the majority of respondents (76.5%, 234) were female students. More than half of the respondents (72.5%, 222) were aged between 18 and 20 years old. Almost half of the respondents (49.3%, 151) were studying business and management. Most of the respondents (52.3%, 160) were in their second year (Part 3 & 4). In terms of ethnicity, a majority of the respondents (37.3%, 114) were of the Kadazan/Dusun or Murut ethnicity. Students from the Diploma in Business Studies were the highest participants (49.3%, 151) in this study.

Table 1 Respondents' Profile (N=306)

Items	Category	Frequency	Percentage
Gender	Male	72	23.5
	Female	234	76.5
Age	18-20	222	72.5
	21-23	81	26.5
	24-26	1	0.3
	26 and above	2	0.7
Ethnicity	Kadazan/Dusun/Murut	114	37.3
	Bajau	63	20.6
	Brunei	33	10.8
	Bugis	17	5.6
	Melayu	39	12.7
	Others	40	13.1
Year of study	1st Year	44	14.4

	2nd Year	160	52.3
	3rd Year	97	31.7
	Others	5	1.6
Program	Diploma in Business Studies	151	49.3
	Diploma in Accounting	56	18.3
	Diploma in Planting Industry Management	24	7.8
	Diploma in Science	9	2.9
	Diploma in Tourisms Management	6	2.0
	Diploma In Public Administration	41	13.4
	Diploma in Banking	19	6.2

4.0 DATA ANALYSIS AND FINDINGS

In this study, the data were analysed using Partial Least Squares (PLS) path modelling approach to Structural Equation Modelling (SEM) version 3.0. There was a two-stage process involved in PLS path modelling. First, the assessment of the reliability and validity of the measurement model and second is the assessment of structural model to test the hypotheses under study (Barclay, Thompson & Higgins, 1995). These assessments are presented in the next subsections.

4.1 First Stage: Assessment of the Measurement Model

The assessment of the measurement model is required to determine the reliability and validity of the survey instrument. Thus, the internal consistency, indicator reliability, convergent validity, and discriminant validity were performed to assess the outer model.

For this study, the internal consistency or composite reliability of each construct ranges from 0.770 to 0.886 and this is above the recommended threshold value of 0.70, as shown in Table 2. Thus, the results pointed out that the items used to represent construct have satisfactory internal consistency reliability. Only two items from the academic performance were dropped, due to low loadings. Next, for convergent validity, the average variance extracted (AVE) is used to measure the variance captured by the indicators relative to measurement error, and it should be greater than 0.50 (Barclay, Thompson & Higgins, 1995). The result of the analysis showed that all constructs have AVE ranging from 0.507 to 0.610, which demonstrates an adequate convergent validity (Table 2). Discriminant validity indicates the degree to which one construct differs from the others. It can be assessed using two measures: i) cross loading, and ii) Fornell & Larcker's (1981) criterion. Table 3 and Table 4 revealed that all measurement items fulfilled the requirement of discriminant validity; cross loading and Fornell & Larcker's (1981) criterion. In Table 3, the loadings of the indicators are higher on their respective construct compared to other constructs.

While in Table 4, all square roots of AVE exceeded the off-diagonal elements in their corresponding rows and columns.

Table 2 Internal Consistency, Indicator Reliability, and Convergent Validity

Construct / Items	Loading	Composite reliability (CR)	Average variance extracted (AVE)
Academic Performance (AP)		0.770	0.538
AP2	0.506		
AP4	0.808		
AP5	0.839		
Students' Attitude (SA)		0.879	0.549
SA1	0.663		
SA2	0.794		
SA3	0.747		
SA4	0.779		
SA5	0.764		
SA6	0.687		
Social Support (SS)		0.860	0.507
SS1	0.675		
SS2	0.749		
SS3	0.764		
SS4	0.728		
SS5	0.643		
SS6	0.707		
Teaching Method (TM)		0.886	0.610
TM1	0.707		
TM2	0.841		
TM3	0.770		
TM4	0.847		
TM5	0.730		

Table 3 Discriminant Validity: Cross Loadings

Construct	AP	SA	SS	TM
Academic Performance (AP)				
AP2	**0.506**	0.164	0.121	0.233
AP4	**0.808**	0.243	0.274	0.201
AP5	**0.839**	0.385	0.238	0.244
Students' Attitude (SA)				
SA1	0.312	**0.663**	0.171	0.398
SA2	0.225	**0.794**	0.215	0.322
SA3	0.224	**0.747**	0.284	0.296
SA4	0.276	**0.779**	0.388	0.313
SA5	0.322	**0.764**	0.225	0.254
SA6	0.293	**0.687**	0.213	0.225

SOCIAL SUPPORT (SS)				
SS1	0.201	0.261	**0.675**	0.394
SS2	0.228	0.248	**0.749**	0.466
SS3	0.281	0.231	**0.764**	0.338
SS4	0.178	0.278	**0.728**	0.350
SS5	0.156	0.172	**0.643**	0.311
SS6	0.186	0.245	**0.707**	0.339
Teaching Method (TM)				
TM1	0.210	0.344	0.368	**0.707**
TM2	0.247	0.346	0.404	**0.841**
TM3	0.224	0.229	0.408	**0.770**
TM4	0.273	0.359	0.461	**0.847**
TM5	0.218	0.317	0.361	**0.730**

Table 4 Discriminant Validity: Fornell-Larcker Criterion

CONTSRUCT	AP	SA	SS	TM
AP	**0.734**			
SA	0.382	**0.741**		
SS	0.297	0.335	**0.712**	
TM	0.302	0.409	0.515	**0.781**

Diagonals (in bold) represent the square root of AVE while the other entries represent the correlations

4.2 Stage 2: Assessment of Structural Model

After validity and reliability tests were performed, the next stage or the second step in PLS path modelling is the assessment of structural model. The results of the three hypotheses are presented in Table 5. The R^2 value was 0.20, suggesting that 20% of the variance in the academic performance can be explained by the teaching method, students' attitude, and perceived social support. All hypotheses (H1,H2, and H3) are found to be significant and supported. It can be seen in Table 5 that student attitude ($\beta = 0.289$, $p < 0.01$) is the most significant predictor of academic performance, followed by social support ($\beta = 0.144$, $p < 0.01$) and teaching method ($\beta = 0.110$, $p < 0.01$).

Table 5 Hypotheses and Results

Hypothesis	**Relationship**	**Path Coefficient**	***t* Values**	**P values**	**Supported**
H1	**Teaching Method → Academic Performance**	0.110	1.806	0.036	Yes
H2	**Students' Attitude → Academic Performance**	0.289	3.862	0.000	Yes
H3	**Social Support → Academic Performance**	0.144	2.040	0.021	Yes
R^2		**0.20**			

5.0 DISCUSSION

First and foremost, the present research proves that all three hypotheses are positively significant. Based on the result, it can be concluded that student's attitude is the most significant factor contributing to the students' academic performance ($\beta = 0.289$, $p < 0.01$). In other words, if the students have a positive attitude towards learning such as attending classes in a timely manner, actively participating in the class activities, diligently doing their revision, and thoroughly preparing before each class, they are more likely to achieve a better academic performance. This finding is consistent with several previous studies (Abdullah, Mesir, & Mohamad, 2006; Erdogan, Bayram, & Deniz, 2008; McClenney, Marti, & Adkins, 2012; Zainudin, Suhashila, Najib et al., 2007).

Furthermore, the perceived social support from family and peers was also found to be positively related to academic performance ($\beta = 0.144$, $p < 0.01$). Students who have a close relationship with peers and family and have someone to help them when needed are more motivated to study, will achieve a better academic performance. This result is parallel with previous research (Gonzalez-Pienda, Nunez, Gonzalez-Pumariega, et al., 2002; Mattanah, Lopez, & Govern, 2011; Mahaffy, 2004). Lastly, the teaching methods also determine the academic performance ($\beta = 0.110$, $p < 0.01$) of the undergraduate students. Proper teaching methods such as employing new technologies, conducting well-organised lecturing sessions, fully engaging the students in the teaching process, and acknowledging the students' viewpoint were among the characteristics that students perceived as having a positive impact on their academic performance. Similar findings were revealed in previous studies by Adunola (2011); Grasha (1996); and Zeeb (2004).

6.0 RECOMMENDATION AND CONCLUSION

Student's performance is the main concern of the higher learning institutions as it indicates the quality of students they have created. Since students' attitude is the most significant factor as revealed by this research, the researcher suggests that the institutions should focus more on developing the students' inner motivations. This is because the passion for learning is driven by an intrinsic factor which lies within the student (Erdogan, Bayram, & Deniz, 2008). Motivational and influential factors such as the supports from family and friends and the learning environment should also be considered in shaping the students' attitudes towards academic performance. Moreover, previous research conducted by Beskeni, Yousuf, Awang, et al. (2011) suggested that recognition from the institutions is one of the contributing factors for students' academic achievement. Although students vary in terms of their intellectual capabilities, they are eager to compete and succeed, Hence, this is another way to enhance the academic performance of a student (Ariffin, 2007). Various learning style also can be employed in order to shape student attitude in class. A fun learning environment in a class will increase their participation to do a better task and assignments. A positive learning environment helps to increase students' academic performance.

Additionally, lecturers need to improvise their teaching method, encourage students to participate in the classroom activities by having an active two-way communication, and also to enhance their teaching methods to be more up-to-date. Moreover, lecturers must be well prepared for every session to ensure a smooth class that students will appreciate and enjoy. These elements will motivate the students and encourage them to engage in the teaching and learning process. Lecturers also need to be more creative

in conducting meaningful and interactive learning methods that will capture students' attention and interest. Among the current tools include the use of presentation software, or high-tech tablets, online collaboration and application. The previous research also stated that the use of technologically-enhanced class environment resulted in a greater cooperative group dynamic (Lavooy & Palmer, 2003). Therefore, lecturers should create a conducive and exciting atmosphere for learning in order to enhance the development of students' learning experience.

The perceived social support from family and peers were also the significant factor in affecting the academic performance of the students (Gonzalez-Pienda, Nunez, Gonzalez-Pumariega, et al., 2002); Franco & Levitt, 1998; Mahaffy, 2004). If the students have a strong support and encouragement from people around them, they are prone to have a positive value attributes, and learning engagement (Reynolds & Clements, 2005). Subsequently, these positivity increases the students' achievement (Cutrona, Cole, Colangelo, Assouline et al., 1994).

The findings of this study will significantly contribute to the higher learning institution especially UiTM; i) to achieve UiTM's vision in producing outstanding scholars of academic excellence, competitive and of world-class standards; ii) to contribute to the institution and lecturers' understanding on how to improve students' academic performance; iii) as a guideline to achieve the Quality Objectives of UiTM, i.e. 90% of the students will be graduated on time or Graduate on Time (GOT); iv) as a guideline for the students with regards to appropriate attitude and behaviour in regards to their studies; 5) to create awareness among parents, lecturers and management of the university on the importance of a good support system to the students.

7.0 LIMITATIONS OF THE STUDY AND FUTURE RESEARCH SUGGESTION

Although this study makes significant contributions to the determinant of academic performance, the study was also constrained by some limitations. These limitations, however, open up various avenues for future research. Firstly, there were limitations in the sample of the research which only involved Diploma students of UiTM, Sabah. Thus, the next research could include other universities in Malaysia. Secondly, this study only examined the effect of three constructs (teaching method, student attitude and perceived social support) on academic performance. Therefore, it is suggested for future research to include other factors such as students' learning style, academic resources, students' personality, cognitive and other factors.

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